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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/628,945

07/30/2003

Edward J. Merritt JR.

9104

7590

08/25/2004

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EXAMINER

MARTINEZ, JOSEPH P

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/628,945	MERRITT ET AL.	
	Examiner	Art Unit	
	Joseph P. Martinez	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-16 is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 12 is/are rejected.
- 7) ☒ Claim(s) 3 and 5-11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7-30-03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 18 in fig. 3 on p. 4, ln. 16. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4 and 12 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Afshari (5828502).

Re claim 1, Afshari teaches for example in figs. 1 and 12, A Z-axis assembly for an optical inspection apparatus, comprising: a) a base (14, col. 4, ln. 24-29); b) first and second rails

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(10) secured to said base, said first and second rails being parallel to each other (wherein the office interprets rods 10 in fig. 1 to be parallel); c) a plurality of carriages (12, 44, 52 and 58) supported by ball bearings (122, col. 4, ln. 58-64) for translatory movement (col. 4, ln. 61-64) parallel to the Z-axis (wherein the office interprets the optical axis to be the Z-axis) on each of said first and second rails, said carriages having a line of travel through said ball bearings (wherein the office interprets the teachings of Afshari wherein the rods pass through the carriage on ball bearings to teach the claimed limitation of "line of travel through said ball bearings") in contact with their respective rails; a support structure (22, col. 4, ln. 14-17) secured to said carriages; e) a lens assembly (24, col. 4, ln. 14-17) secured to said support structure such to be movable parallel to the Z-axis (col. 4, ln. 61-64), said lens assembly including an optical axis parallel to the Z-axis and said lines of travel (wherein the office interprets the optical axis to be the Z-axis and therefore parallel), said optical axis and said lines of travel on a common plane (wherein the office interprets the optical axis to be the Z-axis and therefore in a common plane).

Re claim 2, Afshari further teaches for example in fig. 5, a) said base is U-shaped in cross-section (52) including first and second upright walls (wherein the office interprets the disconnected portion of 52 to teach the upright walls); and b) said first and second rails (10) are secured to respective first and second upright walls (wherein the office interprets each rod 10 can be placed in any or each portion 30, 104 or 106).

Re claim 4, Afshari further teaches for example in fig. 5, carriages are U-shaped in cross-section (52).

Re claim 12, Afshari further teaches for example in fig. 1, optical axis lie centrally between said lines of travel of said carriages (wherein the office interprets the optical axis of 24

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to fall in between rods 10 when assembled and therefore teach the claimed limitations of lying centrally between said lines of travel of the carriages 12).

Allowable Subject Matter

Claims 3 and 5-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art taken alone or in combination fails to anticipate or fairly suggest the limitations of the claims, in such a manner that a rejection under 35 USC 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in dependent claims 3 and 5-11.

Specifically regarding claim 3, Afshari teaches the state of the art of a Z-axis optical assembly.

But, Afshari fails to explicitly teach said first and second rails include opposed longitudinal grooves along which said ball bearings travel, as claimed.

Specifically regarding claim 5, Afshari teaches the state of the art of a Z-axis optical assembly.

But, Afshari fails to explicitly teach a) said support structure is a box structure; and b) said lens assembly is disposed within said box structure, as claimed.

Claims 13-16 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art taken alone or in combination fails to anticipate or fairly suggest the limitations of the claims, in such a manner that a rejection under 35 USC 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claim 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Specifically regarding claim 13, Afshari teaches the state of the art of a Z-axis optical assembly.

But, Afshari fails to explicitly teach d) a box structure support secured to said carriages; e) said box structure support including a front structure, a rear plate and first and second side members joined to said front structure; f) said rear plate providing a platform for supporting a component of the optical inspection system, as claimed.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph P. Martinez whose telephone number is 571-272-2335. The examiner can normally be reached on M-F 7:00 AM to 3:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
8-11-04



Georgia Epps
Supervisory Patent Examiner
Technology Center 2800